

# Coordinating with Railroads

Project Development and  
Environmental Analysis Branch



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## **Purpose**

The purpose of this procedure is to provide guidance on railroad coordination for proposed transportation projects. The procedure should be referenced throughout the project development process when impacts to railroads are anticipated or identified.

## **Background**

The NCDOT Rail Division has a joint mission of overseeing the development of the railroads in North Carolina and ensuring that transportation improvement projects proposed by NCDOT and local municipalities are coordinated with the various railroads when there are potential impacts to the existing or proposed rail network.

Due to the corporate nature of the railroad companies, PDEA should coordinate with the various rail companies through the appointed personnel in the Rail Division and, when necessary, the Structure Design Unit. Typically, railroad companies have a small section responsible for coordinating with state DOTs. Both CSX and Norfolk Southern have huge networks that traverse most of the states in the eastern US and prefer to deal with a few designated contacts rather than many individual project managers. Also, when referring to specific locations in their network, railroad companies identify them by milepost, district, and subdivision. Unless this information is provided by the Rail Division, the Project Planning Engineer does not have a means of identifying locations along the railroad.

For additional information, reference:

- [Rail Corridor Preservation Act](#)
- [Rail Corridor Preservation Policy](#)

## **Responsibility**

The following people are involved in this procedure:

- ✚ PDEA Project Planning Engineer – responsible for initial contact with NCDOT's Rail Division at the beginning of a project.
- ✚ NCDOT Rail Division – responsible for assessing potential impacts to existing/proposed railroads, coordination with the various railroad companies, and as applicable coordination with the Structure Design Unit

- ✚ Structure Design Unit – responsible for assisting in early coordination with the various railroad companies when projects impact both highway and railroad bridges.

## ***Procedures***

### Field Visit

1. The Project Planning Engineer (PPE) should use GIS and other mapping resources to identify any railroad lines within the potential study area prior to the field visit.
2. During the field visit, the PPE should visually identify areas where proposed improvements may impact the railroad right of way including any potential improvements to Y-lines that may result in impacts to the railroad. Also, the PPE should note any major terminals (i.e. intermodal or auto terminals) that would require blockage of a crossing by trains for extended periods of time.
3. Note if crossings are signalized or unsignalized.

### Scoping

1. Initial contact with the NCDOT Rail Division can occur early in the project development process, but should occur no later than the Scoping Meeting.
2. The NCDOT Rail Division representative will attend the Project Initiation Meeting and/or Scoping Meeting to offer information about existing and proposed railroads in the project study area. The Scoping Sheets should be sent to James Harris who will route the letter to the proper individuals for comments. The Rail Division has a checklist they use to insure all potential issues are addressed in the response letter. Reference the Scoping Process for R, U, & I Projects for additional guidance on scoping.
3. The Rail Division will respond in writing with scoping comments and, if needed, will attend the Scoping Meeting. Depending on the type of improvement proposed by the project and the type of railroad involvement, the scoping comment letter will identify the Rail Division staff that should be coordinated with for the project. At a minimum, the Rail Division should provide the following information:
  - The owner of the railroad line and milepost
  - The number of trains utilizing the section of track within the study area and the posted train speed. If passenger trains use the track, there will be a different travel speed.
  - Exposure index: The product of the number of trains per day and the AADT in the design year.
  - Crossing recommendations: Grade separation (based off of exposure index) or closure of adjacent crossings if within 0.5 miles on each side of proposed improvement.
  - Future passenger rail or commuter rail corridor. There is a difference (frequency and distance of service). If it is a future high speed corridor for passenger rail, the Rail Division may recommend a sealed corridor which typically means grade separations at crossings.
  - Design criteria (horizontal and vertical clearances).
  - Notification if the proposed project is located in an area of a Traffic Separation Study.

- For a more thorough list, please see [attachment](#).
4. Use the above information to also begin coordinating with the Structure Design Unit when bridges are potentially impacted (both highway bridges and railroad bridges). The Structure Design Unit will coordinate with the railroads on future track expansion needs that will affect the proposed bridge lengths.
  5. Issues that may be discussed at the project initiation or scoping meeting include, but are not limited to:
 

Scoping considerations (widening)

    - Does the railroad parallel the project corridor and if so, will widening to the side of the railroad encroach on the right of way or physical tracks.
    - If the railroad crosses over (grade separated) the existing road and widening is proposed, is there enough clearance under the railroad bridge for the additional lanes? If not, a replacement railroad structure is required and a temporary onsite railroad detour is required or permanent railroad realignment is required.
    - Will the proposed improvement require improvements to Y-lines that intersect the railroad line?
    - If the railroad and highway/street meet at grade, will the proposed widening impact existing gates and signals protecting the crossings.
    - If the railroad and highway/street meet at grade and there are no existing gates and signals, does the crossing merit upgrading and has funding already been set aside for those improvements.
    - If there is an at-grade crossing, is the facility a Strategic Highway Corridor? If so, what is the corridor vision? Does the vision support at-grade rail and road intersections?

Scoping considerations (new location)

- Is the facility a Strategic Highway Corridor? If so, what is the corridor vision? Does the vision support at-grade rail and road intersections.
- Are there any rail lines in the proposed new location study area?
- Based off of mapping (aerial and/or GIS), are there areas where rails merge or branch off? Avoid junctions.
- Based off of the CTP or feasibility study, are there any interchanges proposed near a rail line.

Scoping (bridge replacement)

- If the project proposes to replace a bridge over a railroad, does existing horizontal clearance provide adequate room for future planned expansion by the railroad (i.e., service road, additional track, etc.).
- Depending on age of the structure to be replaced, and any additional horizontal clearance that is required, vertical clearance may be an issue.

Additional considerations during scoping

- Ensure project limits are shown on mapping submitted to the Rail Division.
- If possible, include aerial mapping of project area when submitting the scoping packet.
- Locate and show railroad right-of-way

Preliminary Corridor Development and Functional/Preliminary Design

1. Once the project team is ready to begin developing functional and preliminary designs, the project team should consider the following when assessing the various alternatives.
  - Are slope stakes and proposed right of way encroaching upon existing railroad right of way? Use the Microstation property line file (*tipproject#\_prl*) and the proposed right of way file (*tipproject#\_row*) files to check.
  - If a realignment of the railroad is required, the Rail Division will provide the design of the track realignment to Roadway Design.
  - The design files for the realignment should include slope stakes; the PPE should use the slope stake file (*tipproject#\_ss*) to calculate stream and/or wetland impacts due to the realignment.
  - Railroads are more sensitive to major changes in grade than roads. If a grade separation (rail over existing road) is proposed and the rail line needs to be raised, the study area may need to be extended along the rail line in each direction to account to the additional horizontal distance required to accommodate a rise in vertical clearance.
2. Most importantly, if potential rail conflicts are identified at any point in the project development and final design process, the Rail Division should be coordinated with immediately. This will reduce the likelihood of having to make design changes at the tail end of the process due to lack of coordination.
3. If the project is going through the Merger Process, involve the Rail Division in all pre-concurrence meetings to determine if they need to send a representative to act as a subject matter expert at the concurrence meeting. More than likely, they will attend the concurrence meeting especially with complex projects issues.

#### Draft Environmental Document Reviews

During departmental review of the draft environmental document, send copies to James Harris and the Rail Division staff identified in the scoping comment letter for their review and comments.

#### Public Involvement

If the Rail Division recommended a crossing closure to be included as part of a roadway improvement, they can be included in the Public Involvement Process. Jamal Pullen is the Rail Division contact for public involvement regarding railroad crossing closures.

#### Points of Contact

- James B. Harris: Scoping Comments and PDEA coordination
- Allen Raynor (Structural Design Unit): All railroad structures
- David Hinnant: Right of way encroachments, at-grade crossings
- Drew Thomas : Crossing lights and gates
- Jamal Pullen: at-grade crossing closures and public involvement

#### **Contacts**

- For suggestions to change this procedure contact: Karen Capps, [kbcapps@ncdot.gov](mailto:kbcapps@ncdot.gov)

- For questions about performing this procedure contact: James B. Harris, [jbharris@ncdot.gov](mailto:jbharris@ncdot.gov)

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